Manitoba
Agriculture
and Food

Guidelines For Estimating

# Weaner Pig (Nursery) Costs 5 - 23 kg

Based on marketing 32592 pigs

nformation Update

www.gov.mb.ca/agriculture/

Date: **February, 2002**

This publication is intended to provide a format and a set of guidelines for determining the cost of production for a weaner pig 5-23 kg enterprise. This type of operation is intended to represent the second stage, or nursery, of a three stage pork system. The three production stages are as follows: first stage - farrow to 5 kg, second stage - weaner pig (nursery) 5 to 23 kg, third stage - grower/finisher 23 kg to market weight. The costs listed in this budget are estimates and not figures obtained from an actual survey of the industry in Manitoba. Adjustments will be necessary when applying these figures to your enterprise.

The assumptions on which the costs are based are outlined in the supporting pages. These assumptions were arrived at using the breeding stock, management practices, and facilities seen in modern, well managed swine operations of comparable size in Manitoba. Productivity and performance assumptions are based on information collected by department specialists, feed companies and other organizations. Where individual herd productivity and performance levels differ from those listed adjustments will be required.

Accurate, up to date, production and financial records are essential for the effective application of these guidelines to an individual operation. Without such information accurate cost of production projections cannot be determined.

The guideline can be useful for comparison purposes. Comparison of costs at different levels of production can be made with other farms, the farm over a period of time or comparing the plan with the actual results at the end of the planning period.

# Weaner Pig (Nursery) Costs 5-23 kg Cost of Production

The following farrow wean cost of production budget is based on the assumption that all feed is purchased.

The budget also includes a land investment cost based on the assumption that 160 acres would be required for this size of operation, with 140 acres being rented out at $25 per acre.

If developing a cost of production budget to include home mixed rations the following items should be added to the budget:

- additional equipment costs associated with a mix mill;
- additional bins for different ingredients;
- additional labour for feed preparation.

The rations illustrated in this budget are examples only.
Individual farm conditions should be taken into account when formulating the diets.
Producers need to know what the intakes of their animals are.
Please consult with a nutritionist for diet formulation suggestions.

The Manitoba pork production industry profile is changing and this budget was specifically designed to address the need of producers who may want to analyze the cost of starting up or switching to a swine nursery 5-23 kg operation. Several companies are offering contracts with varying levels of guarantees. Producers need to accurately calculate their costs before they can properly make a decision.

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# Weaner Pig (Nursery) 5-23 kg Summary
## February, 2002

| A. Operating Costs | $/Pig Sold | Total Cost | Your Cost |
|---|---|---|---|
| **1. Feed Costs:** | | | |
| 1.01 Pre Starter 1 | 0.47 | 15,318 | |
| 1.02 Pre Starter 2 | 1.56 | 50,844 | |
| 1.03 Starter 1 | 3.36 | 109,509 | |
| 1.04 Starter 2 | 8.05 | 262,366 | |
| **Total Feed Cost** | **$13.44** | **$438,037** | |
| **2. Other Operating Costs:** | | | |
| 2.01 Weanling cost | 39.60 | 1,290,643 | |
| 2.02 Veterinary Medicine & Supplies | 0.43 | 14,100 | |
| 2.03 Maintenance & Repairs | 0.14 | 4,563 | |
| 2.04 Hydro & Propane | 2.15 | 70,000 | |
| 2.05 Insurance | 0.12 | 3,911 | |
| 2.06 Manure Costs | 0.48 | 15,707 | |
| 2.07 Office Supplies | 0.04 | 1,440 | |
| 2.08 Levy, Marketing & Transportation | 1.00 | 32,592 | |
| 2.09 Property Taxes | 0.18 | 6,000 | |
| Subtotal Operating Costs | 57.59 | 1,876,993 | |
| 2.10 Interest on Operating Cost | 0.42 | 13,689 | |
| **Total Operating Costs** | **$58.01** | **$1,890,682** | |
| **B. Fixed Costs** | | | |
| **3. Depreciation:** | | | |
| 3.01 Buildings and Manure Storage | 0.68 | 22,163 | |
| 3.02 Equipment | 1.08 | 35,199 | |
| Total Depreciation Cost | $1.76 | $57,362 | |
| **4. Investment:** | | | |
| 4.01 Land Cost | 0.05 | 1,600 | |
| 4.02 Buildings and Manure Storage | 0.32 | 10,429 | |
| 4.03 Equipment | 0.26 | 8,474 | |
| Total Investment Cost | $0.63 | $20,503 | |
| **Total Fixed Costs** | **$2.39** | **$77,865** | |
| **C. Labour** | | | |
| Wages, benefits and hired manager | $1.53 | $49,866 | |
| **Total Cost of Production** | **$61.93** | **$2,018,413** | |

| Break-Even Price | $/Pig | |
|---|---|---|
| Operating Cost | $58.01 | |
| Operating & Labour Cost | $59.54 | |
| Operating Labour & Fixed Cost | $61.93 | |

# Weaner Pig (Nursery) Production Costs 5-23 kg

1. This input table outlines the cost of production for the weaner barn only.
2. Buildings and equipment are valued at new cost.
3. Manure haulage is contracted out.

**Herd Profile**

| | | | |
|---|---|---|---|
| Weaner Pig Places | **4,800** | | |
| Number of turns | **7** | | |
| Weaner Pigs Purchased | **33,600** | | |
| Percent Post-Weaning Mortality | **3.0** | | |
| Pigs Died, Post-Weaning | **1,008** | | |
| Weaner Pigs Sold | **32,592** | | |
| Previous 5 weeks Average Market Price | **$72.00** /cwt | $158.73 | /ckg |
| Weanling Formula Factor (% of Mkt Price) | **0.55** | | |
| Calculated Weanling Puchase Price | $39.60 /pig | | |

| **Feed Requirements** | | | **Ration Cost** | |
|---|---|---|---|---|
| | | | **Purchased** | **Home-Mixed** |
| Pre Starter 1(sew) | **0.4** | kg/pig | **$1,172.00** | $0.00 /tonne |
| Pre Starter 2 (Phase 1UF) | **1.7** | kg/pig | **$920.00** | $0.00 /tonne |
| Starter 1(Phase 2 UF) | **7.0** | kg/pig | **$480.00** | $0.00 /tonne |
| Starter 2 (Phase 3 UF) | **23.0** | kg/pig | **$350.00** | $0.00 /tonne |
| Total Feed | **32.1** | kg/pig | | |

**Weaner Pig Efficiency**

| | | |
|---|---|---|
| Days Weaner on feed (nursery) | **42** | days |
| Total Cycle Days (per turn) | **52** | days |
| Target Starting Weight | **5.0** | kg |
| Target Ending Weight | **23.0** | kg |
| Feed Conversion Ratio (feed:gain) | **1.78** | kg |
| Average Daily Gain | **0.43** | kg |

**Labour**

| | | |
|---|---|---|
| Total Hours per 7-day week | **80.0** | hours/week |
| Wage (includes benefits & hired manager) | **$12.00** | /hour |

## Capital Investment

| | | $/Sq. Ft. | $/Pig Place | Total |
|---|---|---|---|---|
| **Buildings** | | | | |
| Barn | 9,600 sq ft | **$43.75** | $87.50 | $420,000 |
| Office & loading | | | | **$5,000** |
| Feed Mill (building only) | | | | **$0** |
| **Total Building Cost** | | | | **$425,000** |
| **Equipment** | | | | |
| Nursery barn | | | | **$285,000** |
| Generator | | | | **$12,000** |
| Electrical & other | | | | **$90,000** |
| Fire Alarm System | | | | **$1,000** |
| Feed Bins | | | | **$4,000** |
| Ingredient Bins | | | | **$0** |
| **Total Equipment Cost** | | | | **$392,000** |
| **Total Buildings and Equipment Cost** | | | | **$817,000** |
| **Land Value** | | | | |
| Land Investment | 20 acres @ | $500 | | **$10,000** |
| **Other Costs** | | | | |
| Site preparation | | | | **$30,000** |
| Manure Storage | | | | **$28,000** |
| **Total Other Costs** | | | | **$58,000** |
| **Total Capital Investment** | | | | **$885,000** |

## Feed Ingredient Costs

| Ingredients | Price/tonne | Your Cost |
|---|---|---|
| Barley | $162.00 | |
| Hulless Barley | $0.00 | |
| Wheat-HRS | $155.00 | |
| Wheat-CPS | $155.00 | |
| Corn | $141.00 | |
| Field Peas | $0.00 | |
| Soybean Meal - 47 % | $300.00 | |
| Canola Meal - 34% | $200.00 | |
| Supplemental Protein (Base Mix) | $0.00 | |
| Creep/Starter Premix | $850.00 | |
| Sow Micro Premix | $2,550.00 | |
| Grower Micro Premix | $2,400.00 | |
| Canola Oil | $600.00 | |
| Whey Powder | $720.00 | |
| Herring Meal | $1,400.00 | |
| Plasma | $7,500.00 | |
| Limestone | $70.00 | |
| Phosphorous (16-21) | $450.00 | |
| Salt - 96% | $100.00 | |
| L-Lysine HCL | $2,550.00 | |
| L-Threonine | $6,100.00 | |
| D,L-Methionine | $0.00 | |
| Oats - Steam rolled | $400.00 | |
| Other Ingredients | — | |
| Other Ingredients | — | |
| Other Ingredients | — | |
| | | |
| Processing Cost | | |
| (Hydro & Repairs/Maintenance & Insurance) | $3.25 /tonne | |
| Percent Weight loss due to processing | 1.25 % | |
| Labour | $4.00 /tonne | |

## Feed Requirement and Cost Summary

| | Amount (kg) | Price $ /tonne | Ration Cost $ /tonne | Your Cost |
|---|---|---|---|---|
| **Pre starter 1:** | | | | |
| Corn | 108.4 | $141.00 | $15.28 | |
| Soybean Meal - 47 % | 120.2 | $300.00 | $36.06 | |
| Creep/Starter Premix | 29.5 | $850.00 | $25.08 | |
| Canola Oil | 27.2 | $600.00 | $16.32 | |
| Whey Powder | 120.2 | $720.00 | $86.54 | |
| Herring Meal | 61.3 | $1,400.00 | $85.82 | |
| Plasma | 59.0 | $7,500.00 | $442.50 | |
| Oats - Steam rolled | 474.2 | $400.00 | $189.68 | |
| Total Pre Starter 1 | **1,000.0 kg** | | **$897.28** | |
| Adjusted for weight loss (percentage) | | 1.25 % | $908.50 | |
| Plus processing cost per tonne | | $3.25 | $911.75 | |
| Plus Labour Cost | | $4.00 | **$915.75** | |
| **Pre starter 2** | | | | |
| Corn | 133.9 | $141.00 | $18.88 | |
| Soybean Meal - 47 % | 129.3 | $300.00 | $38.79 | |
| Creep/Starter Premix | 34.0 | $850.00 | $28.90 | |
| Canola Oil | 18.2 | $600.00 | $10.92 | |
| Whey Powder | 124.8 | $720.00 | $89.86 | |
| Herring Meal | 74.7 | $1,400.00 | $104.58 | |
| L-Lysine HCL | 0.5 | $2,550.00 | $1.28 | |
| Oats - Steam rolled | 484.6 | $400.00 | $193.84 | |
| Total Pre Starter 2 | **1,000.0 kg** | | **$487.05** | |
| Adjusted for weight loss (percentage) | | 1.25 % | $493.14 | |
| Plus processing cost per tonne | | $3.25 | $496.39 | |
| Plus Labour Cost | | $4.00 | **$500.39** | |
| **Starter 1** | | | | |
| Corn | 607.5 | $141.00 | $85.66 | |
| Soybean Meal - 47 % | 204.2 | $300.00 | $61.26 | |
| Creep/Starter Premix | 39.9 | $850.00 | $33.92 | |
| Canola Oil | 11.3 | $600.00 | $6.78 | |
| Whey Powder | 90.7 | $720.00 | $65.30 | |
| Herring Meal | 45.4 | $1,400.00 | $63.56 | |
| L-Lysine HCL | 1.0 | $2,550.00 | $2.55 | |
| Total Starter 1 | **1,000.0 kg** | | **$319.03** | |
| Adjusted for weight loss (percentage) | | 1.25 % | $323.02 | |
| Plus processing cost per tonne | | $3.25 | $326.27 | |
| Plus Labour Cost | | $4.00 | **$330.27** | |

**Starter 2**

| | | | | |
|---|---|---|---|---|
| Barley | 186.0 | $162.00 | $30.13 | |
| Corn | 545.8 | $141.00 | $76.96 | |
| Soybean Meal - 47 % | 226.9 | $300.00 | $68.07 | |
| Creep/Starter Premix | 39.9 | $850.00 | $33.92 | |
| L-Lysine HCL | 1.4 | $2,550.00 | $3.57 | |
| Total Starter 2 | **1,000.0 kg** | | **$212.65** | |
| Adjusted for weight loss (percentage) | | 1.25 % | $215.31 | |
| Plus processing cost per tonne | | $3.25 | $218.56 | |
| Plus Labour Cost | | $4.00 | **$222.56** | |

# Weaner Pig (Nursery) 5-23kg Production Costs Worksheet

## A. Operating Costs

### 1. Feed Requirements and Costs

| | | | Your Cost |
|---|---|---|---|
| **1.01 Pre starter 1** | | | |
| | 0.40 | kg ration/pig | |
| x | $1,172.00 | /tonne | |
| + | 1,000 | kg/tonne | |
| = | **$0.47** | **/pig sold** | |
| **1.02 Pre starter 2** | | | |
| | 1.7 | kg ration/pig | |
| x | $920.00 | /tonne | |
| + | 1,000 | kg/tonne | |
| = | **$1.56** | **/pig sold** | |
| **1.03 Starter 1** | | | |
| | 7.0 | kg ration/pig | |
| x | $480.00 | /tonne | |
| + | 1,000 | kg/tonne | |
| = | **$3.36** | **/pig sold** | |
| **1.04 Starter 2** | | | |
| | 23.0 | kg ration/pig | |
| x | $350.00 | /tonne | |
| + | 1,000 | kg/tonne | |
| = | **$8.05** | **/pig sold** | |

### 2. Other Operating Costs

| | | | |
|---|---|---|---|
| **2.01 Weanling Purchase** | | | |
| | $72.00 | $/cwt average market price | |
| x | 0.55 | % of mkt price weanling formula factor | |
| | **$39.60** | **purchase cost** | |
| **2.02 Veterinary Medicine & Supplies** | | | |
| | $3,600 | professional services | |
| + | $10,500 | medication | |
| + | 32,592 | pigs sold | |
| = | **$0.43** | **/pig sold** | |

**2.03 Maintenance & Repairs**

| | | | |
|---|---|---|---|
| | $817,000 | building & equipment cost | _____ |
| x | 0.55 | % year repair & maintenance | _____ |
| ÷ | 32,592 | pigs sold | _____ |
| = | **$0.14** | **/pig sold** | _____ |

**2.04 Hydro & Propane**

| | | | |
|---|---|---|---|
| | $30,000 | hydro | _____ |
| + | $40,000 | propane | _____ |
| + | 32,592 | pigs sold | _____ |
| = | **$2.15** | **/pig sold** | _____ |

**2.05 Insurance**

| | | | |
|---|---|---|---|
| | $817,000 | investment | _____ |
| x | $0.46 | rate/$100 | _____ |
| ÷ | 100 | /$100 capital | _____ |
| ÷ | 32,592 | pigs sold | _____ |
| = | **$0.12** | **/pig sold** | _____ |

**2.06 Manure Costs**

| | | | |
|---|---|---|---|
| Haulage | 2.2 | litres/pig/day | _____ |
| x | 365 | days | _____ |
| x | $0.003 | /litre | _____ |
| x | 4,800 | pig places | _____ |
| ÷ | 32,592 | pigs sold | _____ |
| = | $0.35 | /pig sold | _____ |

Odour control

| | | | |
|---|---|---|---|
| | $4,300 | total cost | _____ |
| ÷ | 32,592 | pigs sold | _____ |
| = | $0.13 | /pig sold | _____ |
| **Total =** | **$0.48** | **/pig sold** | _____ |

**2.07 Office Supplies** _____

| | | | |
|---|---|---|---|
| | $0.30 | /pig place | _____ |
| | $4,800 | pig places | _____ |
| ÷ | 32,592 | pigs sold | _____ |
| = | $0.04 | **/pig sold** | _____ |

**2.08 Levy, Marketing & Transportation**

| | | | |
|---|---|---|---|
| | **$1.00** | **/pig sold** | _____ |

**2.09 Property Taxes**

| | | | |
|---|---|---|---|
| | $6,000 | total taxes | _____ |
| + | 32,592 | pigs sold | _____ |
| = | **$0.18** | **/pig sold** | _____ |

**2.10 Interest on Operating Cost:**

| | | | |
|---|---|---|---|
| | $39.60 | weaner cost | _____ |
| + | $17.99 | subtotal operating | _____ |
| + | 2 | average | _____ |
| x | 52 | days per turn | _____ |
| ÷ | 365 | days per year | _____ |
| x | 6.0 | % operating interest | _____ |
| = | **$0.42** | **/pig sold** | _____ |

## B. Fixed Costs

**3. Depreciation:** $\frac{\text{Original cost - Salvage Value}}{\text{Useful Life}}$

### 3.01 Buildings

| | | | |
|---|---|---|---|
| | $483,000 | building cost (including manure storage) | _____ |
| - | $42,500 | salvage value (building only) | _____ |
| ÷ | 20 | years useful life | _____ |
| ÷ | 32,592 | pigs sold | _____ |
| = | **$0.68** | **/pig sold** | _____ |

### 3.02 Equipment

| | | | |
|---|---|---|---|
| | $392,000 | equipment cost | _____ |
| - | $39,200 | salvage value | _____ |
| ÷ | 10 | years useful life | _____ |
| ÷ | 32,592 | pigs sold | _____ |
| = | **$1.08** | **/pig sold** | _____ |

**4. Investment:** $\frac{\text{Original Cost + Salvage Value}}{2}$ **x Investment Rate**

### 4.01 Land

| | | | |
|---|---|---|---|
| | $10,000 | land value | _____ |
| + | $30,000 | site preparation | _____ |
| x | 4.0 | % investment rate | _____ |
| ÷ | 32,592 | pigs sold | _____ |
| = | **$0.05** | **/pig sold** | _____ |

### 4.02 Buildings

| | | | |
|---|---|---|---|
| | $483,000 | building cost (including manure storage) | _____ |
| + | $42,500 | salvage value (building only) | _____ |
| ÷ | 2 | average | _____ |
| x | 4.0 | % investment rate | _____ |
| ÷ | 32,592 | pigs sold | _____ |
| = | **$0.32** | **/pig sold** | _____ |

### 4.03 Equipment

| | | | |
|---|---|---|---|
| | $392,000 | equipment cost | _____ |
| + | $39,200 | salvage value | _____ |
| ÷ | 2 | average | _____ |
| x | 4.0 | % investment rate | _____ |
| ÷ | 32,592 | pigs sold | _____ |
| = | **$0.26** | **/pig sold** | _____ |

## C. Labour

| | | | |
|---|---|---|---|
| | 80.0 | hours/week | _____ |
| x | 52 | weeks/year | _____ |
| x | $12.00 | /hour | _____ |
| ÷ | 32,592 | pigs sold | _____ |
| = | **$1.53** | **/pig sold** | _____ |

## Summary of Home Mixed Feed Ingredients Used

**Total pigs sold 32,592**

| | Total per Year (tonnes) | Total per Month (tonnes) | Total per Pig (kgs) | Total per Pig (lbs) |
|---|---|---|---|---|
| Barley | 0.0 | 0.00 | 0.0 | 0.0 |
| Corn | 0.0 | 0.00 | 0.0 | 0.0 |
| Field Peas | 0.0 | 0.00 | 0.0 | 0.0 |
| Soybean Meal - 47 % | 0.0 | 0.00 | 0.0 | 0.0 |
| Creep Premix | 0.0 | 0.00 | 0.0 | 0.0 |
| Canola Oil | 0.0 | 0.00 | 0.0 | 0.0 |
| Whey Powder | 0.0 | 0.00 | 0.0 | 0.0 |
| Herring Meal | 0.0 | 0.00 | 0.0 | 0.0 |
| Plasma | 0.0 | 0.00 | 0.0 | 0.0 |
| L-Lysine HCL | 0.0 | 0.00 | 0.0 | 0.0 |
| Oats - Steam rolled | 0.0 | 0.00 | 0.0 | 0.0 |
| **Total** | **0.0** | **0.00** | **0.0** | **0.0** |

## Summary of Purchased Feed Ingredients Used

| | Total per Pig Mkt (kgs) | Total per Year (tonnes) | Total per Month (tonnes) | Total per Pig Mkt (lbs) |
|---|---|---|---|---|
| Pre starter 1 | 0.4 | 13.4 | 1.1 | 0.9 |
| Pre starter 2 | 1.8 | 57.1 | 4.8 | 3.9 |
| Starter 1 | 7.2 | 235.2 | 19.6 | 15.9 |
| Starter 2 | 23.7 | 772.8 | 64.4 | 52.3 |
| **Total** | **33.1** | **1,078.6** | **89.9** | **73.0** |
| **Total** | **33.1** | **1,078.6** | **89.9** | **73.0** |

**For further information contact your local Manitoba Agriculture and Food office.**

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